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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|---|-------------|----------------------|--------------------------------|------------------------|
| 10/528,181  | 10/30/2006  | Christian Krummel    | 10191/3616                     | 6744                   |
| 26646 7590<br>KENYON & KENYON LLP<br>ONE BROADWAY<br>NEW YORK, NY 10004 |             |                      | EXAMINER<br>TANINGCO, MARCUS H |                        |
|   |             |                      | ART UNIT<br>2884               | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>06/18/2008        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/528,181

**Applicant(s)**

KRUMMEL ET AL.

**Examiner**

MARCUS H. TANINGCO

**Art Unit**

2884

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 10, 11, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (US 5,721,430).

With regards to claims 8 and 15, Wong discloses an IR detector for measuring of a substance in a beam path of a radiation source (Fig. 4) comprising: a first and second detector (4, 5) arranged on a first chip (30); a first and a second filter (F1, F2) arranged on a second chip, wherein the first chip and the second chip are connected to one another in a hermetically sealed fashion (column 17, lines 32-35) (*wherein the hermetically sealed fashion is the environment in which said first and second chips are connected*).

With regards to claim 10, Wong discloses said first and second detectors comprise a thermopile element (column, 9, lines 9-10).

With regards to claim 11, Wong discloses an absorber layer provided on said detectors (column 18, lines 4-7).

With regards to claim 14, Wong discloses a third detector and a third filter (Fig. 4).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong.

With regards to claim 9, Wong discloses said first and second chip are connected hermetically (column 17, lines 32-35) but fails to specify a connection by wafer-bonding. Nevertheless, those skilled in art appreciate that sealing techniques, such as wafer-bonding, are well known and absent some degree of criticality, would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

With regards to claim 13, although Wong fails to specifically teach a Fabry-Perot type filter, those skilled in the art appreciate that, absent some degree of criticality, providing a specific type of filter to filter specific wavelengths would have been a matter of routine design

choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Wood (US 5,892,140 A).

With regards to claim 12, Wong discloses the claimed invention except for the decoupling of said detectors from said substrate. Wood discloses a thermal gas sensor comprising detectors (19) arranged over pits (116). As such, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the pits taught by Wood in order to minimize heat loss.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Wood (US 2005/0178952).

With regards to claims 16 and 18, Wong fails to specifically teach a bonding web between the first and second chips. Wood teaches a multi-band gas sensor comprising: detectors (17) mounted on a first chip (29); and filters (34) mounted on a second chip (28), wherein said first chip and second chip are hermetically sealed with a seal ring (32). Wong teaches hermetically sealing the detector assembly in order to increase its life expectancy by preventing dust buildup. The technique taught by Wood would provide the same protection to the detector assembly. Substituting the technique taught by Wood with the technique taught by Wong would have been obvious since the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. With regards to

the type of sealer/bond, those skilled in the art appreciate that, absent some degree of criticality, the specific type would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

### **Allowable Subject Matter**

Claims 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regards to claims 17 and 19, although prior art teaches multiple detectors in a hermetically sealed environment, prior art fails to teach hermetically isolating each detector.

### **Response to Arguments**

Applicant's arguments filed 3/11/2008 have been fully considered but they are not persuasive. The rejections of claims 1 and 15 have been modified to address applicant's argument.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS H. TANINGCO whose telephone number is (571)272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2884

*/Marcus H Tanningco/  
Examiner, Art Unit 2884*

*/David P. Porta/  
Supervisory Patent Examiner, Art Unit 2884*